

CLAIMS

What is claimed is:

1. An apparatus for supporting a tool, the apparatus comprising:

5 a support member, the support member having an adjustable length between a first end and a second end;

a control device operably coupled with the support member, the control device being configured to receive a supply of a motivating force and a user input, the control device being further configured to direct at least a portion of the motivating force to the support member to direct the support member to at least one of extend and contract as indicated by the user input received;

10 a tool bracket disposed at the first end of the support member, the tool bracket being configured for receiving a tool and including a tiltable coupling joining the tool bracket to the support member such that the tool bracket is tiltable relative to a position of the support member; and

15 a base end disposed at the second end of the support member, the base end being configured to engage a supporting surface.

2. The apparatus of Claim 1, wherein the support member includes an extensible cylinder, the extensible cylinder including a shaft and a housing, the shaft being slidable within an inner channel of the housing such that relative positioning of the shaft within the housing causes the support member to one of extend and contract.

3. The apparatus of Claim 2, wherein the support member includes a pressure cylinder and the motivating force includes a pressure source.

4. The apparatus of Claim 3, wherein the control device is configured to direct a pressure from the pressure source into the pressure cylinder causing the shaft to extend from the housing thereby causing the support member to extend when the user input indicates the support member is to be moved to an extend position.

5. The apparatus of Claim 3, wherein the control device is configured to direct a pressure from the pressure source into the pressure cylinder causing the shaft to retract into the housing thereby causing the support member to contract when the user input indicates the support member is to be moved to a contract position.

5 6. The apparatus of Claim 3, wherein the control device is configured to release pressure from the pressure cylinder allowing the shaft to retract into the housing thereby allowing the support member to contract when the user input device is motivated to a contract position.

7. The apparatus of Claim 3, wherein the pressure cylinder includes a pneumatic
10 cylinder and the pressure source includes a pressurized gas source.

8. The apparatus of Claim 3, wherein the pressure cylinder includes an hydraulic cylinder and the pressure source includes a pressurized liquid source.

9. The apparatus of Claim 1, wherein the support member includes a plurality of
15 slidable members coupled with at least one motorized coupling, the motorized coupling being configured to position the slidable members relative to each other such that a relative positioning of the plurality of members causes the support member to one of extend and contract.

10. The apparatus of Claim 9, wherein the motorized coupling includes at least one electric motor and the motivating force includes an electric power source.

20 11. The apparatus of Claim 1, wherein the control device includes a multiple-position control including an extend position, a contract position, and a neutral position, the control device being configured such that when the multiple-position control is in the neutral position the control device neither directs the support member to extend nor to contract.

25 12. The apparatus of Claim 1, wherein the control device includes an extend control and a contract control, the control device being configured so that when neither the extend

control and the contract control is actuated, the control device neither directs the support member to extend nor to contract.

13. The apparatus of Claim 1, wherein the control device includes at least one of a hand-operable device and a foot-operable device.

5 14. The apparatus of Claim 1, further comprising a support handle extending from the tiltable tool bracket.

15. The apparatus of Claim 14, wherein the control device is disposed on the support handle.

10 16. The apparatus of Claim 1, wherein the tiltable coupling includes at least one of a rotatable joint and a swiveling joint.

17. The apparatus of Claim 1, wherein the base end is configured to be tiltable relative to a surface receiving the base end.

15 18. The apparatus of Claim 1, further comprising a base plate, the base plate being configured to be engaged by the supporting surface and further configured to tiltablely receive the base end of the support member.

19. The apparatus of Claim 18, wherein the base plate is configured to tiltablely receive the base end with one of a hinged joint and a ball joint configured to tiltablely couple the base end of the support member to the base plate.

20 20. A system for supporting a tool, the apparatus comprising:
a supply of a motivating force;
a support member, the support member having an adjustable length between a first end and a second end;
a control device operably coupled with the support member and the supply of the motivating force, the control device being configured to receive a user input
25 directing the support member to one of extend or contract and further

configured to direct at least a portion of the motivating force to the support member to direct the support member to at least one of extend or contract as indicated by the user input received;

5 a tool bracket disposed at the first end of the support member, the tool bracket being configured for receiving a tool and including a tiltable coupling joining the tool bracket to the support member such that the tool bracket is tiltable relative to a position of the support member; and

a base end disposed at the second end of the support member, the base end being configured to engage a supporting surface.

10 21. The system of Claim 20, wherein the support member includes an extensible cylinder, the extensible cylinder including a shaft and a housing, the shaft being slidable within an inner channel of the housing such that relative positioning of the shaft within the housing causes the support member to one of extend and contract.

15 22. The system of Claim 21, wherein the support member includes a pressure cylinder and the supply of the motivating force includes a pressure source.

23. The system of Claim 22, wherein the control device is configured to direct a pressure from the pressure source into the pressure cylinder causing the shaft to extend from the housing thereby causing the support member to extend when the user input indicates the support member is to be moved to an extend position.

20 24. The system of Claim 22, wherein the control device is configured to direct a pressure from the pressure source into the pressure cylinder causing the shaft to retract into the housing thereby causing the support member to contract when the user input indicates the support member is to be moved to a contract position.

25 25. The system of Claim 22, wherein the control device is configured to release pressure from the pressure cylinder allowing the shaft to retract into the housing thereby

allowing the support member to contract when the user input device is motivated to a contract position.

26. The system of Claim 22, wherein the pressure cylinder includes a pneumatic cylinder and the pressure source includes a pressurized gas source.

5 27. The system of Claim 22, wherein the pressure cylinder includes an hydraulic cylinder and the pressure source includes a pressurized liquid source.

28. The system of Claim 20, wherein the support member includes a plurality of slidable members coupled with at least one motorized coupling, the motorized coupling being configured to position the slidable members relative to each other such that a relative
10 positioning of the plurality of members causes the support member to one of extend and contract.

29. The system of Claim 28, wherein the motorized coupling includes at least one electric motor and the supply of the motivating force includes an electric power source.

30. The system of Claim 20, wherein the control device includes a multiple-position
15 control including an extend position, a contract position, and a neutral position, the control device being configured such that when the multiple-position control is in the neutral position the control device neither directs the support member to extend nor to contract.

31. The system of Claim 20, wherein the control device includes an extend control and a contract control, the control device being configured so that when neither the extend
20 control and the contract control is actuated, the control device neither directs the support member to extend nor to contract.

32. The system of Claim 20, wherein the control device includes at least one of a hand-operable device and a foot-operable device.

33. The system of Claim 20, further comprising a support handle extending from the
25 tiltable tool bracket.

34. The apparatus of Claim 33, wherein the control device is disposed on the support handle.

35. The system of Claim 20, wherein the tiltable coupling includes at least one of rotatable joint and a swiveling joint.

5 36. The system of Claim 20, wherein the base end is configured to be tiltable relative to a surface receiving the base end.

37. The system of Claim 20, further comprising a base plate, the base plate being configured to be engaged by the supporting surface and further configured to tiltablely receive the base end of the support member.

10 38. The system of Claim 37, wherein the base plate is configured to tiltablely receive the base end with one of a hinged joint and a ball joint configured to tiltablely couple the base end of the support member to the base plate.

39. A method for supporting a tool, the system comprising: /

tiltablely coupling a first end of a support member to a tool, the support member

15 having an adjustable length;

engaging a second end of the support member with a supporting surface;

controllably coupling a source of the externally applied motivating force to the support member; and

selectably directing the motivating force to the support member to direct the support member to at least one of extend or contract.

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40. The method of Claim 39, wherein the motivating force is selectably directed to the support member using at least one of a hand-operated control and a foot-operated control.

41. The method of Claim 39, further comprising further comprising providing a support handle extending from the first end of the support member..

42. The method of Claim 39, further comprising tiltably engaging the second end of the support member with the supporting service such that the support member is tiltable relative to the supporting surface.

43. The method of Claim 39, wherein the motivating force includes at least one of a
5 pressure source or an electric power source.